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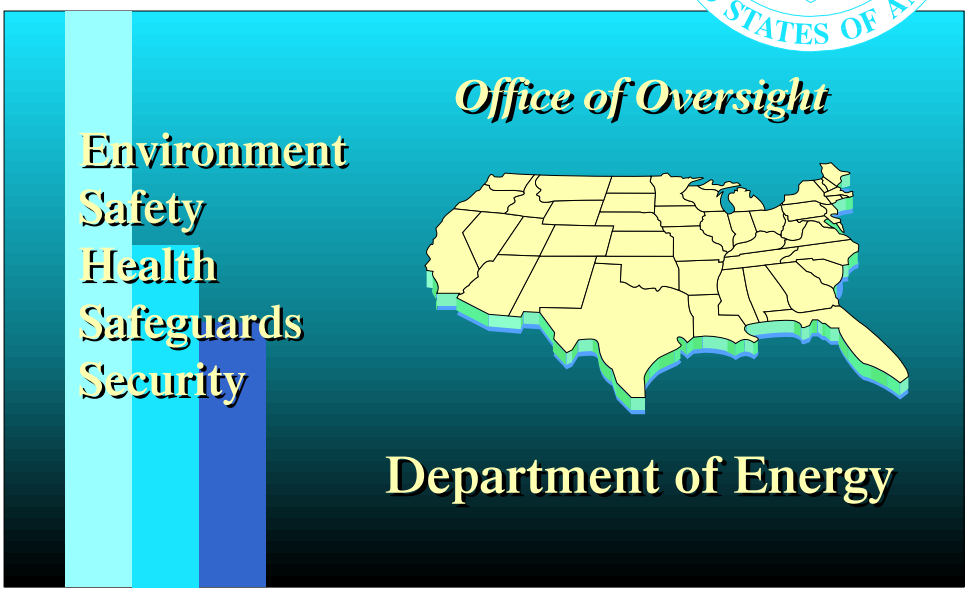
OVERSIGHT

Hanford Site

Safeguards and Security Profile Summary Analysis

August 1997



Office of Environment, Safety and Health

1.0 Introduction

The Department of Energy (DOE), Office of Environment, Safety and Health, conducted a review of the current safeguards and security posture at the Hanford Site and at the local DOE operations office in Richland, Washington, in August 1997. This review was part of a recent initiative to characterize the current status of safeguards and security programs throughout the Department. This summary describes significant aspects of the safeguards and security posture at the site observed during the review.

2.0 Background

Location

The Hanford Site is 560 square miles of semiarid land located in the southeastern quadrant of Washington State.

Mission

The Hanford Site was chosen for the Manhattan Project in 1943 to produce plutonium for the nation's first nuclear weapons. While defense production has been a prime mission of the Hanford Site, Hanford's activities now focus on environmental restoration and waste management; scientific and environmental research; development and application of radioactive and hazardous waste management technologies; and the design, construction, and operation of major energy-related test and development facilities.

Security Interests

Significant amounts of plutonium are located at the site in various forms. Additionally, large quantities of highly radioactive materials are stored on site. Hanford's classified information assets include classified documents and parts, a sensitive compartmented information facility, classified work for others, special access programs, communications security accounts, and classified and sensitive unclassified computers.

Protection Strategy

To meet protection needs, the Hanford Site employs a multiple-layered protection strategy to protect the site's security interests. These layers include: (1) physical barriers (fences, barbed wire, razor ribbon) and electronic intrusion detection systems at the outermost boundaries of site security areas; (2) the buildings in which the assets are located and the intrusion detection systems, alarms, access controls, and search procedures associated with those buildings; and (3) the vaults, vault-type rooms, safes, and associated intrusion detection systems and administrative controls within the buildings in which the security interests are stored.

A number of administrative and electronic or mechanical protection measures are employed at various points throughout these layers of protection. Administrative measures include the security clearances granted to personnel having access to various security interests, a human reliability program that employs random drug tests and psychological testing for personnel with direct access to special nuclear material, a staff badging system to distinguish staff with security clearances from those without, numerous entry/exit points staffed by protective force personnel, and protocols such as "two person" rules which assure that at least two persons are present when nuclear material is being handled in order to minimize the possibility that a single insider could commit a malevolent act undetected.

Electronic/mechanical protection measures include access controls such as cipher locks, hand geometry identification systems, magnetic key cards and personal identification numbers, closed circuit television, and an array of safe combination locks and lock and key controls.

Finally, the Hanford Site has a protective force (the Hanford Patrol) consisting of armed personnel who assess and respond to security matters anywhere within the multiple layers of the protection scheme described.

3.0 Results of Past Safeguards and Security Reviews

The most recent self-assessments of the Hanford Site safeguards and security program by site contractors and the surveys by the local DOE operations office have been positive. Areas reviewed included program management, protection program operations, information security, nuclear material control and accountability, and personnel security. The results of the current review correlate closely with the results of the most recent inspection by the DOE Office of Security Evaluations, in which management programs, protection of special nuclear materials, and protection of information were all found to be performing acceptably.

4.0 Results of This Review

Positive Trends and Initiatives

The various indicators considered during this review all support the conclusion that classified matter is being protected, and that special nuclear materials used and stored at the Hanford Site are adequately protected against theft and radiological sabotage.

A significant indicator was the industrial security approach employed at Hanford, an approach that relies heavily on staff coordination, integration, and competence. Coordination and integration of the actions of both the operations office and contractor staff were noted as being particularly strong and serving as the foundation for Hanford's industrial approach to safeguards and security. Managers cited staff competence and experience as reasons why Hanford has been successful in achieving this high level of coordination and integration, and in developing innovative ways of implementing the industrial security approach.

Another indicator is the achievement of effective protection for priority assets in the face of significant budget reductions. In anticipation of budget reductions in 1992, Richland Operations Office safeguards and security management prepared a transition plan providing for extensive consolidation of special nuclear material and other national security interests. As a result of its close working relationship with its site contractors, the operations office has been able to implement key initiatives that have facilitated the management of resource reduction and operational change. Consequently, the operations office has maintained effective protection for its safeguards and security interests while managing an orderly reduction in safeguards and security costs.

Also worth noting is the site's proactive approach in developing vulnerability analyses for the high number of radiological sabotage targets at Hanford. The Hanford Site has taken the lead in analyzing radioactive sabotage consequences and has been innovative in addressing some issues in which policy guidance has been lacking.

Classified and unclassified sensitive information is being effectively protected at Hanford, with the necessary managerial, administrative, and physical protection elements in place for both classified matter and classified computer assets. This conclusion also applies to the sensitive compartmented information facility, where the most sensitive classified assets at the Hanford Site are kept. In the area of computer security, only stand-alone computer systems are used to process classified information, and their physical protection is effective. Computer systems processing unclassified sensitive information, while connected via various networks, are more resistant to penetration than similar systems at most other DOE sites, as demonstrated by performance tests conducted during the most recent comprehensive inspection.

Overall, the safeguards and security program at Hanford provides a stable, effective protection posture that employs a graded approach to ensure the most efficient utilization of resources.

Issues Warranting Management Attention

Although the overall vulnerability analysis program is generally sound, it has not included analyses for scenarios involving the removal of highly radioactive materials to offsite locations for the purpose of radiological sabotage. This issue is not effectively addressed in DOE policy.

There is also a need to address the identified causes of recent protective force "friendly fire" incidents. During tests of protective force effectiveness in responding to security emergencies, protective force personnel were killed (in simulation) by other protective force personnel. Though these incidents did not detract from the overall ability of the protective force to accomplish its mission, they require management attention to ensure that the appropriate corrective actions are completed. Hanford is now implementing corrective actions pertaining to this situation with respect to communications equipment, protective force response command and control, and protective force training in target acquisition.